

CLAIMS:

1. A key for wirelessly powering and selectively allowing access to an enclosure identified by an enclosure identification, the enclosure having an otherwise unpowered enclosure lock controller to control an electric enclosure lock mechanism, the key and the lock controller in two-way communication for transmitting and receiving variable signals for validating that the key is authorized to access the enclosure, the variable signals being alternately transmitted between the key and the lock controller to deter detection and duplication of the variable signals to prevent unauthorized access to the enclosure, the key comprising:

- a) a housing;
- b) a processor located within the housing, the processor operative to build the variable signals for transmission from the key to the lock controller and to interpret the variable signals received by the key from the lock controller;
- c) a storage device located within the housing in communication with the processor, the storage device operative to store data for building and interpreting the variable signals being alternately transmitted between the key and the lock controller for validating that the key is authorized to access the enclosure;
- d) a data transmitter located within the housing in communication with the processor, the data transmitter operative to wirelessly transmit signals from the key to the lock controller, to inductively transmit an access request signal to the lock controller upon proper alignment with the lock controller, and to transmit an interrogation response signal in response to receiving to a variable interrogation request;

e) a data receiver located within the housing in communication with the processor, the data receiver operative to receive the variable interrogation signal; and

f) a power transmitter located within the housing in communication with the processor for wirelessly transmitting power to the lock controller, the power transmitter and the data transmitter simultaneously wirelessly transmitting data and power to the lock controller.

2. The key of Claim 1, further comprising:

a) a plurality of date sensitive key activation codes stored in the storage device; and

b) a keypad located on the external surface of the housing used for entering one of the date sensitive key activation codes.

3. The key of claim 1, further comprising a display located on the external surface of the housing.

4. The key of Claim 1, further comprising receiving an access report signal at the key from the lock controller, the access report signal indicating whether sufficient power has been transmitted to unlock the enclosure.

5. The key of Claim 1, wherein the key selectively allows access to the enclosure via wireless simultaneous transfer of data and of power to the lock controller using a method of transmitting the variable signals comprising:

a) transmitting the access request signal identifying the key from the key to the lock controller;

b) receiving by the key, the variable interrogation signal from the lock controller, in response to the access request signal;

c) decoding the variable interrogation signal to determine an enclosure identification and identify

a variable interrogation question, the variable interrogation question corresponding to one of a plurality of possible interrogation questions;

d) validating that the key is authorized to access the enclosure by comparing the enclosure identification to a list of authorized enclosure identifications stored in the key;

e) computing the interrogation response signal using a selected stored cipher variable corresponding to the interrogation question and the enclosure identification, in response to a key validation;

f) transmitting the interrogation response signal from the key to the lock controller; and

g) repeatedly transmitting power from the key to the lock controller until the key receives a signal from the lock controller indicating that sufficient power has been received by the lock controller to send an open signal to the enclosure lock.

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